

CLAIMS

We claim:

1. A slider for use on a zipper of the type comprising
5 a first profile having a first interlocking member and a
second profile having a second interlocking member
adapted to mate with said first interlocking member, said
slider comprising:

10 a pair of spaced apart arms defining at opposite
ends of said arms a zipper opening end of said slider and
a zipper closing end of said slider, top ends of said
arms being joined by a slider top;

15 a keeper depending from said slider top between said
arms at said zipper opening end, said keeper being
positioned to engage only said first interlocking member
and secure it from engaging said second interlocking
member;

and means for retaining said slider on said zipper.

20 2. The slider in accordance with claim 1 wherein said
retaining means includes a first shoulder at a bottom end
of one of said arms and a second shoulder at a bottom end
of the other of said arms, said shoulders being directed
to each other.

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3. The slider in accordance with claim 2, further
comprising a groove in an interior side of said slider
top aligned with said first shoulder and wherein said
keeper is disposed within said groove.

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4. An apparatus for inserting a slider onto a length of zipper of the type comprising a first profile having a first interlocking member and a second profile having a second interlocking member mated with said first interlocking member, said apparatus comprising:

a guide for receiving a length of said zipper;

a pusher movable in a direction generally transverse to said length of zipper and including a forked member for engaging a portion of said zipper to offset said first interlocking member relative to said second interlocking member in the direction of movement of said pusher; and

means for guiding a slider over said offset interlocking members of said zipper and urging said slider onto said offset interlocking members.

5. The apparatus in accordance with claim 4 wherein said forked member includes protruding fins bordering a curved clearance wherein said first interlocking member and said second interlocking member are received within said clearance.

6. The slider insertion apparatus in accordance with claim 5 further including a slider loading rack which delivers a continuous supply of sliders to the guiding means.

7. The slider insertion apparatus in accordance with claim 6 wherein the slider loading rack further includes a mechanical pawl which urges the sliders to move in the slider loading rack to a mounting location.

8. The slider insertion apparatus in accordance with claim 6 wherein the slider loading rack further includes a source of pressurized air fluidly connected to the slider loading rack which urges the sliders to move in the slider loading rack to a mounting location in response to a force of pressurized air from the air source.

9. The slider insertion apparatus in accordance with claim 7 wherein the zipper guide further includes a male guide plate and opposing female guide plate, said guide plates being connected to the slider insertion apparatus by an attachment piece, said male guide plate including a notch defining said mounting location for accommodating a slider within said zipper guide, said notch being positioned along a longitudinal edge of the male plate facing the pusher.

10. The slider insertion apparatus in accordance with claim 9 wherein a first end of the notch of the male guide plate continues from a first zipper exiting end to a first protrusion along the longitudinal edge, said first protrusion extending to the pusher to stabilize the first and second interlocking members during movement of said pusher.

11. The slider insertion apparatus in accordance with claim 10 wherein said female guide plate includes a first notch opposite the first protrusion of the male guide plate and providing a clearance for the movement of the pusher.

12. The slider insertion apparatus in accordance with claim 11 wherein said female guide plate further includes a protrusion opposite the notch of the male guide plate, said protrusion of the female guide plate guiding the
5 length of zipper after slider insertion from said mounting location to an area outside of said male and female guide plates.

13. The slider insertion apparatus in accordance with
10 claim 12 wherein the first zipper exiting end of the male guide plate includes a corner chamfered away from a perpendicular axis of the first zipper exiting end with a radius formed at each remaining corner of the male guide plate and wherein the female guide plate includes a
15 second zipper exiting end with a corner chamfered away from a perpendicular axis of the second zipper exiting end with a radius formed at each remaining corner of the female guide plate such that the radial corners of said male and female guide plates prevent snagging of the
20 length of zipper received by said zipper guide.

14. The slider insertion apparatus in accordance with claim 13 wherein the male guide plate further includes a second protrusion continuing from the first end of the
25 notch and collinear with the first protrusion of the male guide, said second protrusion providing further alignment of the length of zipper after slider insertion.

15. The slider insertion apparatus in accordance with
30 claim 14 wherein the female guide plate further includes a second notch opposite the second protrusion of the male guide plate.

16. A method for inserting a slider onto a length of zipper of the type comprising a first profile having a first interlocking member and a second profile having a second interlocking member mated with said first interlocking member, said method comprising the steps of:

feeding the zipper within a zipper guide;

moving a pusher in a direction generally transverse to said zipper so that said zipper engages a forked member of said pusher at a mounting location of said zipper guide;

offsetting said first interlocking member from said second interlocking member by said forked member in the direction of movement of said pusher;

guiding a slider over said offset interlocking members of said zipper; and

and urging said slider onto said offset interlocking members.

17. The method in accordance with claim 16 wherein the forked member has protruding fins bordering a curved clearance and said first interlocking member and said second interlocking member are guided into said clearance and are offset from one another while in said clearance.

18. The method in accordance with claim 17 wherein the zipper is attached to a continuous supply of thermoplastic film having opposing transverse edges upon which the zipper is disposed.

19. A positioner for moving a slider slidably attached to a zipper, the positioner comprising:

a channel with a clearance sized to accommodate passage of the slider; and

a source of pressurized air fluidly connected to one end of the channel such that the slider moves on the zipper in response to a force of pressurized air from the source.

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20. The positioner in accordance with claim 19 wherein the channel aligns with a bag moving medium of a reclosable bag manufacturing machine such that the source of pressurized air moves the slider against an end stop of the zipper forcing movement of an attached reclosable bag.

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